Amendment to the Specification:

Please replace the paragraph beginning at page 6, line 17 with the following amended paragraph:

FIG. 7 illustrates the possibility of a high degree of integration with other devices of an extracorporeal blood circuit allowed by the pumping unit according to the invention. This figure shows a cylindrical assembly that includes an oxygenator, pumping unit, and heat exchanger within a single housing. The inlet of pumping unit 1 is directly connected at the outlet of heat exchanger 11. The outlet of pumping unit 1 is connected to the inlet of oxygenator 12. The blood from the oxygenator enters directly from the pumping unit in order to flow over hollow fibers contained in an oxygenation chamber 12a, through which oxygen flows from gas inlet 12b to gas outlet 12c. The blood then exits the oxygenator through outlet 12d. The oxygenation chamber is substantially cylindrical. The pumping unit and heat exchanger are positioned within and are generally surrounded by the oxygenator.